REMARKS

In response to the Office Action of February 11, 2008, Applicants respectfully request reconsideration. To further the prosecution of this application, each of the rejections set forth in the Office Action has been carefully considered and is addressed below. The application as presented is believed to be in condition for allowance.

Claims 1-44 were pending. In this Amendment, claims 1, 2, 12-16, 22, 40 and 42-44 have been amended. No new claims have been added. Claims 11 and 24 have been cancelled. Thus claims 1-10, 12-23, and 25-44 are pending, of which claims 1, 16, 22 and 40 are independent claims.

Rejections Under 37 CFR 1.83(a)

The drawings are objected to because the Office Action asserts the drawings do not show "determining a network DNA for the computer network," "network DNA taxonomically classifying," "at least one derived network DNA component specification referencing at least one of said at least one raw network DNA component," "the network species classifications including enterprise network, home network and public place network," and "the network species classifications determined as a function of, at least, network security, network management and network addressing." Applicants respectfully assert that the drawings, particularly when viewed in light of the specification, provide an example of each of these features for the following reasons:

"determining a network DNA for the computer network"

This feature is shown, for example, by FIG. 9 which is described, for example, in paragraphs [0084]-[0085]. "FIG. 9 depicts example steps that may be performed to generate network DNA in accordance with an embodiment of the invention" (paragraph [0084]). The pictured steps provide an example embodiment for determining a network DNA for the computer network.

"network DNA taxonomically classifying"

This feature is shown, for example, in FIG. 5 by network DNA 500, which is described, for example, in paragraphs [0052]-[0064]. FIG. 5 is an example embodiment of network DNA including various exemplary components (e.g., network species 502 component). In an embodiment of the invention, network DNA may taxonomically classify the associated computer network (paragraph [0043]). The example components (e.g, network species 502, network name 504) of the exemplary embodiment of network DNA 500 provide an example of network DNA taxonomically classifying the computer network.

"at least one derived network DNA component specification referencing at least one of said at least one raw network DNA component,"

This feature is shown, for example, in FIG. 4 by derived network DNA component specification 416 which is described, for example, in paragraph [0049]. Specifically, "derived network DNA component specifications 416 may specify a linear or non-linear combination and/or transformation of one or more raw network DNA component values."

"the network species classifications including enterprise network, home network and public place network"

This feature is shown, for example, in FIG. 5 by network species 502 component in the network DNA 500 which is described, for example, in paragraphs [0054]-[0058]. "The network species 502 component of the network DNA 500 may indicate a network class (or species) for the associated computer network. For example, the network species 502 component may indicate that the associated computer network is an enterprise network, a home network or a public place (public) network" paragraph [0054].

"the network species classifications determined as a function of, at least, network security, network management and network addressing"

This feature is shown, for example, in FIG. 5 by network species 502 component in the network DNA 500 which is described, for example, in paragraphs [0054]-[0058]. The recited

features of the network species 502 component are explained in the specification, such as in paragraph [0055]-[0056]:

> [0055] For example, one of the derived network DNA component specifications 416 (FIG. 4) associated with the network species 502 component may specify that the network species 502 component is to indicate that the associated computer network is an enterprise network if the attributes of the associated computer network include a specified combination of: is a secure network (**i.e., has good network security**), is a managed network (i.e., **has good network management**), provides connectivity to one or more specified enterprise resources (e.g., has good local area network connectivity), includes wireless LAN technology, is a mobile network (i.e., has good network mobility), is a private network (e.g., **utilizes internal network addressing**), is a premise network and is not a proximity network.
>
> [0056] The derived network DNA component specification may specify that the network species 502 component is to indicate that the associated computer network is a home network if the attributes of the associated computer network include a specified combination of: is an insecure network (i.e., **has poor network security**), is an unmanaged network (i.e., **has poor network management**), provides ad hoc and/or limited connectivity between network nodes and other computer networks (e.g., the internet), includes PAN, LAN and/or wireless LAN technology, is not a mobile network (i.e., has poor network mobility), is a private network (e.g., **utilizes internal network addressing**), is a premise network or a proximity network.

(emphasis added)

Also, this functionality of the network species 502 component (FIG. 5) is succinctly stated in the Abstract, which states: "Network species classifications may be determined as a function of network security, network management and network addressing."

Rejections Under 37 CFR 1.75(d)(1) and 37 CFR 1.71

The specification is objected to under 37 CFR 1.75(d)(1) because the Office Action asserts that the specification fails to provide proper antecedent basis for the claimed subject matter: DNA, DNA taxonomically classifying, DNA component, linear transformation, evaluation error (as appearing in claim 30), and probabilistically (as appearing in claim 44).

Further, the disclosure is objected to under 37 CFR 1.71 because the Office Action asserts the disclosure is so incomprehensible as to preclude a reasonable search of the prior art. The terms DNA taxonomically classifying, DNA component, network species, and linear transformation are not understood.

Applicant respectfully traverses these rejections by illustrating the support for these terms found in the specification.

DNA	Applicant acknowledges the term DNA is a common acronym for deoxyribonucleic acid, but believes one of ordinary skill in the art would readily recognize and appreciate the reference is metaphorical in light of the manner in which the term DNA is used frequently in the specification. The DNA of a network refers generally to network attributes (paragraph [0043]). *"Network DNA may include derived network DNA components and raw network DNA components."* [0006] Comments on each of these terms follow.
raw network DNA component	*"Raw network DNA components may be any suitable (e.g., acquirable) conventional computer network attribute."* [0047] *"Examples of raw network DNA components include IP addresses, domain names, verified presence of network infrastructure elements (e.g., DNS servers, authentication servers, proxy servers, NAT), successful authentication, parameters received from DHCP servers (e.g., subnet mask), communications media type (e.g., wireless or wire-line), network traffic analysis (e.g., source address set or statistical traffic `fingerprint` match), cost, service provider, roaming agreements, nominal available communications bandwidth, measured available communications bandwidth, logical and physical network location."* [0047]

derived network DNA component	Derived network DNA components also may be regarded as network attributes, but, may be derived by processing raw network DNA components. *"The network DNA generator 404 may determine derived network DNA component values from raw network DNA component value."* [0049] Some examples of the processing used to derive derived network DNA components are also provided in the specification. *"For example, each of the derived network DNA component specifications 416 may specify a linear or non-linear combination and/or transformation of one or more raw network DNA component values."* [0049]
network DNA component	This phrase would be readily understood by one of skill in the art based on the definition of "DNA," as above, and the ordinary meaning of the term "component." It refers to components or parts of the network DNA. *"The example network DNA 500 includes a network species 502 component, a network name 504 component, a network cost 506 component, a core access 508 component, a core addressing 510 component, a network security 512 component and a network technology 514 component. Each network DNA component may be associated with one or more subcomponents, for example, one or more raw network DNA components (e.g., raw network DNA components 420 of FIG. 4) and/or one or more derived network DNA components (e.g., derived network DNA components 422 of FIG. 4)."* [0052]
DNA taxonomically classifying	This phrase would be readily understood by one of skill in the art based on the definition of "DNA," as above, and the ordinary meaning of the term "taxonomically classifying." It indicates that the DNA is useful to place classify. *"Network DNA may taxonomically classify the associated computer network."* [0043] Taxonomically classifying is used in its ordinary sense. Network DNA 500 (FIG. 5) illustrates exemplary network DNA

	components that may be used for taxonomically classifying a computer network (e.g., network species component).
linear transformation	Linear transformation is used in the specification in its ordinary sense. *"For example, each of the derived network DNA component specifications 416 may specify a linear or non-linear combination and/or transformation of one or more raw network DNA component values."* [0049] Linear transformation has a plain and ordinary meaning in mathematics. A linear transformation is a function between two vector spaces that preserves the operation of vector addition and scalar multiplication. A formal definition may be found, for example, at: http://mathworld.wolfram.com/LinearTransformation.html
evaluation error (claim 30)	The meaning of "evaluation error" is well known to those of skill in the art. An evaluation error may occur, for example, when an operation to evaluate an expression fails.
probabilistically (claim 44)	The meaning of "probabilistically" is also well known to those of skill in the art, referring to a computation based on probability, a known branch of mathematics.
network species	*"The network species 502 component of the network DNA 500 may indicate a network class (or species) for the associated computer network. For example, the network species 502 component may indicate that the associated computer network is an enterprise network, a home network or a public place (public) network."* [0054]

Rejections Under 35 U.S.C. §112

Claims 1-44 were rejected under 35 U.S.C. §112, first paragraph, because the Office Action asserts these claims fail to comply with the enablement requirement.

The term "network DNA," and various forms thereof is used throughout the specification. Each form of network DNA (e.g., network DNA component, raw network DNA component) is clearly defined in terms well known in the art. The preceding table clearly presents examples that would reveal to one of skill in the art the meaning of the terms in question.

Accordingly, withdrawal of the rejection of claims 1-44 under 35 U.S.C. §112 is respectfully requested.

Rejections Under 35 U.S.C. §101

Claims 1-21 and 40-44 were rejected under 35 U.S.C. §101 because the Office Action asserts these claims are directed to non-statutory subject matter. Independent claims 1 and 16 are amended to refer to the computer-readable medium as being encoded with instructions that, when executed, perform the recited method. Independent claim 40 is amended to refer to the computer-readable medium storing a data-structure that is accessed by a computer to determine a configuration of said computer. Claims in this form are clearly statutory pursuant to MPEP §2106.01 (I), which states:

> ... a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory.

This section of the MPEP makes it clear that a computer-readable medium encoded with instructions or data used functionally by a computer is statutory. Accordingly, withdrawal of the rejection of claims 1-21 and 40-44 under 35 U.S.C. §101 is respectfully requested.

Rejections Under 35 U.S.C. §102

The Office Action rejects claims 1, 2, 10, 16, 22, and 24 under 35 U.S.C. §102(e) as purportedly being anticipated by Tezuka (2003/0074359).

I. Brief overview of embodiments of the invention

Some embodiments relate to a computer connected to one or more computer networks. The computer may include a network DNA module that determines network DNA for each of the computer networks (paragraph [0043]). The network DNA may be used to determine how to configure the computer according to a network DNA policy. For example, a network DNA policy may specify that system security settings be configured depending on a network species type (e.g., enterprise, home, or public network) associated with a computer network's network DNA (paragraph [0070]).

Network DNA may include derived network DNA components and raw network DNA components (paragraph [0006]). Raw network DNA components may be acquired from local or remote sources. Raw network DNA components may be conventional computer network attributes, for example, IP addresses, domain names, successful authentication, network traffic analysis, cost, service provider, roaming agreements, and nominal available communication bandwidth (paragraph [0043]). Derived network DNA component values may be generated from raw network DNA component values (paragraph [0049]).

The network DNA taxonomically classifies the associated computer network (paragraph [0043]). For example, the network DNA may have one or more network DNA components, for example, a network species component, a network name component, and a network cost component (see FIG. 5; paragraph [0052]). Each network DNA component may be associated with raw and/or derived network DNA components (paragraph [0052]).

Network DNA may be provided to applications through an application program interface (API) (paragraph [0071]).

To enforce a network DNA policy a network DNA policy condition may be tested, for example, when sufficient network DNA components have been acquired (paragraph [0088]).

If the network DNA policy condition is satisfied, a network DNA policy action may be executed (paragraph [0088]-[0089]). For example, a computer with a particular network DNA policy that is connected to a home or public network (as indicated by the network species 502, FIG. 5) may automatically attempt to establish a VPN connection to a specified enterprise network; another network DNA policy may specify that bridging be disabled if a computer with the policy is, for example, connected to both an enterprise network and a home or public network as indicated by the network species (paragraph [0070]).

It should be appreciated that the foregoing discussion of embodiments of the invention is provided merely to assist the Examiner in appreciating various aspects of the present invention. However, not all of the description provided above necessarily applies to each of the independent claims pending in the application. Therefore, the Examiner is requested to not rely upon the foregoing summary in interpreting any of the claims or in determining whether they patentably distinguish over the prior art of record, but rather is requested to rely only upon the language of the claims themselves and the arguments specifically related thereto provided below.

II. Brief overview of Tezuka

Tezuka provides a network management unit which manages the configuration of a network (paragraph [0010]). In the described system, a network element information manager collects and manages network element information from relevant network elements (paragraphs [0031], [0036]). Examples of network elements include network termination equipment, optical network unit, and optical line termination (paragraph [0044]).

Based on the collected network element information, a network management model builder examines the existing network management model and determines if the network management model should be changed (paragraph [0037]). A network management model refers to an abstract systematic representation of the structure of a specific network of interest (paragraph [0032]).

If a change is needed, the network management model builder consults the scenario manager to retrieve an appropriate scenario for the change to create a new version of the network management model with the retrieved scenario (paragraphs [0038], [0062] and [0063]).

III. Independent Claim 1

Claim 1 as amended is directed to a method for configuring the operation of a computer. Claim 1 recites, "generating at least one derived network DNA component according to at least one derived network DNA component specification, each derived network DNA component corresponding to an attribute of the computer network, and at least one of said at least one derived network DNA component specification referencing at least one of said at least one raw network DNA component."

Claim 1 as amended clearly distinguishes over the cited references. The Examiner has cited step S4 (FIG. 2) and paragraph [0038] of Tezuka as purportedly teaching these features. In step S4 a new version of the network management model is created when the network management model builder determines a change to the network management model is needed based on examination of the collected network element information (paragraph [0038]; step S4, FIG. 2).

None of the references show generating at least one derived network DNA component according to at least one derived network DNA component specification, each derived network DNA component corresponding to an attribute of the computer network, and at least one of said at least one derived network DNA component specification referencing at least one of said at least one raw network DNA component.

Claim 1 further recites, "testing a network DNA policy condition of a network DNA policy for satisfaction, the network DNA policy condition referencing at least one of said at least one derived network DNA component" and "initiating an execution of a network DNA policy action of the network DNA policy if the network DNA policy condition of the network DNA policy is satisfied." These limitations further distinguish claim 1 from the prior art of record.

Accordingly, claim 1 patentably distinguishes over the prior art of record, so that the rejection of claim 1 under 35 U.S.C. §102 should be withdrawn.

Claims 2-10 and 12-15 depend from claim 1, incorporate all of its limits, and should be allowed for at least the same reasons. The dependent claims also add limitations that further distinguish over the references, and Applicant reserves the right to argue for the further patentability of these claims.

IV. Independent Claim 16

Claim 16 as amended, recites "providing the network DNA through an interface on the computer." This amendment is supported in the specification. For example, FIG. 4 of the specification depicts the network DNA module 400 with network DNA application programming interface (API) 414. The specification states, for example, "the network DNA application programming interface 414 (FIG. 4) may provide application programs 302 (FIG. 3) and operating system 304 access to network DNA and network DNA policies" (paragraph [0071]).

Claim 16 as amended clearly distinguishes over the cited references. Tezuka, in contrast, teaches aggregating network element information collected from multiple network elements. The reference therefore, does not teach determining or providing network DNA, particularly DNA that includes a network species component, as recited in claim 16.

Accordingly, claim 16 patentably distinguishes over the prior art of record, so that the rejection of claim 16 under 35 U.S.C. §102 should be withdrawn.

Claims 17-21 depend from claim 16, incorporate all of its limits, and should be allowed for at least the same reasons. The dependent claims also add limitations that further distinguish over the references, and Applicant reserves the right to argue for the further patentability of these claims.

V. Independent Claim 22

Claim 22 as amended recites, "an interface configured to provide network DNA to at least one application program."

This amendment is supported in the specification. For example, FIG. 4 of the specification depicts the network DNA module 400 with network DNA application programming interface (API) 414. The specification states, for example, "the network DNA application programming interface 414 (FIG. 4) may provide application programs 302 (FIG. 3) and operating system 304 access to network DNA and network DNA policies" (paragraph [0071]).

Claim 22 as amended clearly distinguishes over the cited references. Tezuka, in contrast, teaches aggregating network element information collected from multiple network elements.

Claim 22 further recites, *inter alia*, "a network species component capable of indicating network species classifications, the network species classifications including an enterprise network, a home network, and a public place network."

This amendment is supported in the specification. The specification states, for example, "The network species 502 component of the network DNA 500 may indicate a network class (or species) for the associated computer network. For example, the network species 502 component may indicate that the associated computer network is an enterprise network, a home network or a public place (public) network" (paragraph [0054]).

Claim 22 as amended clearly distinguishes over the cited references. In contrast, while Tezuka's system comprises several different types of networks (access networks, SDH network, IP network), *these networks are associated with different types of network technologies, not network species*. Specifically, an SDH (Synchronous Digital Hierarchy) is a multiplexing protocol for transferring data over optical fiber. The IP network represents "another single technology domain" (paragraph [0043]). Further, "access networks N1 and N2 are heterogeneous environments where various technologies coexist" (paragraph [0044]). Because the networks of Tezuka are associated with different technologies, not network species, Tezuka does not show a network species component capable of indicating network species classifications, the network species classifications including enterprise network, home network, and public place network.

Marples describes a system for initiating connections through firewalls. Marples does not teach or suggest a network species component capable of indicating network species classifications, the network species classifications including enterprise network, home network, and public place network.

Accordingly, claim 22 patentably distinguishes over the prior art of record, so that the rejection of claim 22 under 35 U.S.C. §102 should be withdrawn.

Claims 23, and 25-39 depend from claim 22, incorporate all of its limits, and should be allowed for at least the same reasons. The dependent claims also add limitations that further distinguish over the references, and Applicant reserves the right to argue for the further patentability of these claims.

Rejections Under 35 U.S.C. §103

The Office Action rejects claims 40 and 41 under 35 U.S.C. §103(a) based on Tezuka in view of Marples et al. (2003/0140142), hereinafter "Marples."

Independent Claim 40

Claim 40 as amended, is directed to a data structure comprising a network DNA which is accessed by a computer to determine a configuration of said computer. Claim 40 recites, *inter alia,* "a network species component capable of indicating network species classifications, the network species classifications including enterprise network, home network and public place network, and the network species classifications determined as a function of, at least, network security, network management and network addressing."

The Examiner has cited passages and figures of Tezuka and Marples as purportedly teaching these features. FIG. 3 and accompanying paragraph [0041] of Tezuka show and describe a network system in which Tezukas invention may be implemented. The system comprises several different types of networks (access networks, SDH network, IP network). However, *these networks are associated with different types of network technologies, not network species*. Specifically, an SDH (Synchronous Digital Hierarchy) is a multiplexing protocol for transferring data over optical fiber. The IP network represents "another single technology domain" (paragraph [0043]). Further, "access networks N1 and N2 are heterogeneous environments where various technologies coexist" (paragraph [0044]). Since the networks of Tezuka are associated with different technologies, not network species, Tezuka does not show the network species classifications determined as a function of, at least, network security, network management and network addressing.

Marples describes a system for initiating connections through firewalls. Paragraph [0005] simply identifies the fact that "private home," "public," and "private corporate" networks may be separated by firewalls and the firewalls may make it difficult for devices on opposite sides to initiate communication. Marples does not teach or suggest firewalls, or anything else, determine network species classifications as a function of, at least, network security, network management and network addressing.

Even if combined, the teachings of Tezuka and Marples do not yield the claimed invention. Rather, the combination would provide a method for initiating communication between Tezuka's network management unit and network elements on access, SDH and IP networks separated by firewalls.

Accordingly, claim 40 patentably distinguishes over the prior art of record, so that the rejection of claim 40 under 35 U.S.C. §103 should be withdrawn.

Claims 41-44 depend from claim 40, incorporate all of its limits, and should be allowed for at least the same reasons. The dependent claims also add limitations that further distinguish over the references, and Applicant reserves the right to argue for the further patentability of these claims.

Claims Rejected Under Different Art or Statute

The Office Action rejects claims 11, 12, 17, 21, 23, and 25-37 under 35 U.S.C. §103(a) based on Tezuka in view of Williams et al. (2005/0257267), hereinafter "Williams."

The Office Action rejects claims 38 and 39 under 35 U.S.C. §103(a) based on Tezuka in view of U.S. Patent No. 6,675,209 (Britt).

The Office Action rejects claims 18 and 19 under 35 U.S.C. §103(a) based on Tezuka in view of U.S. Patent No. 7,257,560 (Jacobs).

The Office Action rejects claims 13-15 under 35 U.S.C. §103(a) based on Tezuka in view of Williams in further view of Marples.

The Office Action rejects claim 20 under 35 U.S.C. §103(a) based on Tezuka in view of Marples.

Each of these claims depends from an independent claim and the rejections are premised on Tezuka meeting all limitations of the independent claims. For reasons given above, Tezuka does not meet all limitations of any of the independent claims. The additional references do not teach or suggest limitations not met by Tezuka and accordingly the references, even if combined, would not teach or suggest all limitations of any of the claims. However, the dependent claims recite limitations that further distinguish from Tezuka, providing additional reasons that the claims should be allowed.

The Office Action rejects claim 42 under 35 U.S.C. §103(a) based on Tezuka in view of Marples in further view of Jacobs.

The Office Action rejects claims 43 and 44 under 35 U.S.C. §103(a) based on Tezuka in view of Marples in further view of Anderson et al. (2004/0068582), hereinafter "Anderson".

Each of these claims depends from an independent claim and the rejections are premised on Tezuka in view of Marples meeting all limitations of the claim 40. For reasons given above, Tezuka in view of Marples does not meet all limitations of claim 40. The additional references do not teach or suggest limitations not met by Tezuka in view of Marples and accordingly the references, even if combined, would not teach or suggest all limitations of any of the claims. However, the dependent claims recite limitations that further distinguish from Tezuka in view of Marples, providing additional reasons that the claims should be allowed.

CONCLUSION

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Dated: May 13, 2008

Respectfully submitted,

By _____
Edmund J. Walsh
Registration No.: 32,950
WOLF, GREENFIELD & SACKS, P.C.
Federal Reserve Plaza
600 Atlantic Avenue
Boston, Massachusetts 02210-2206
617.646.8000